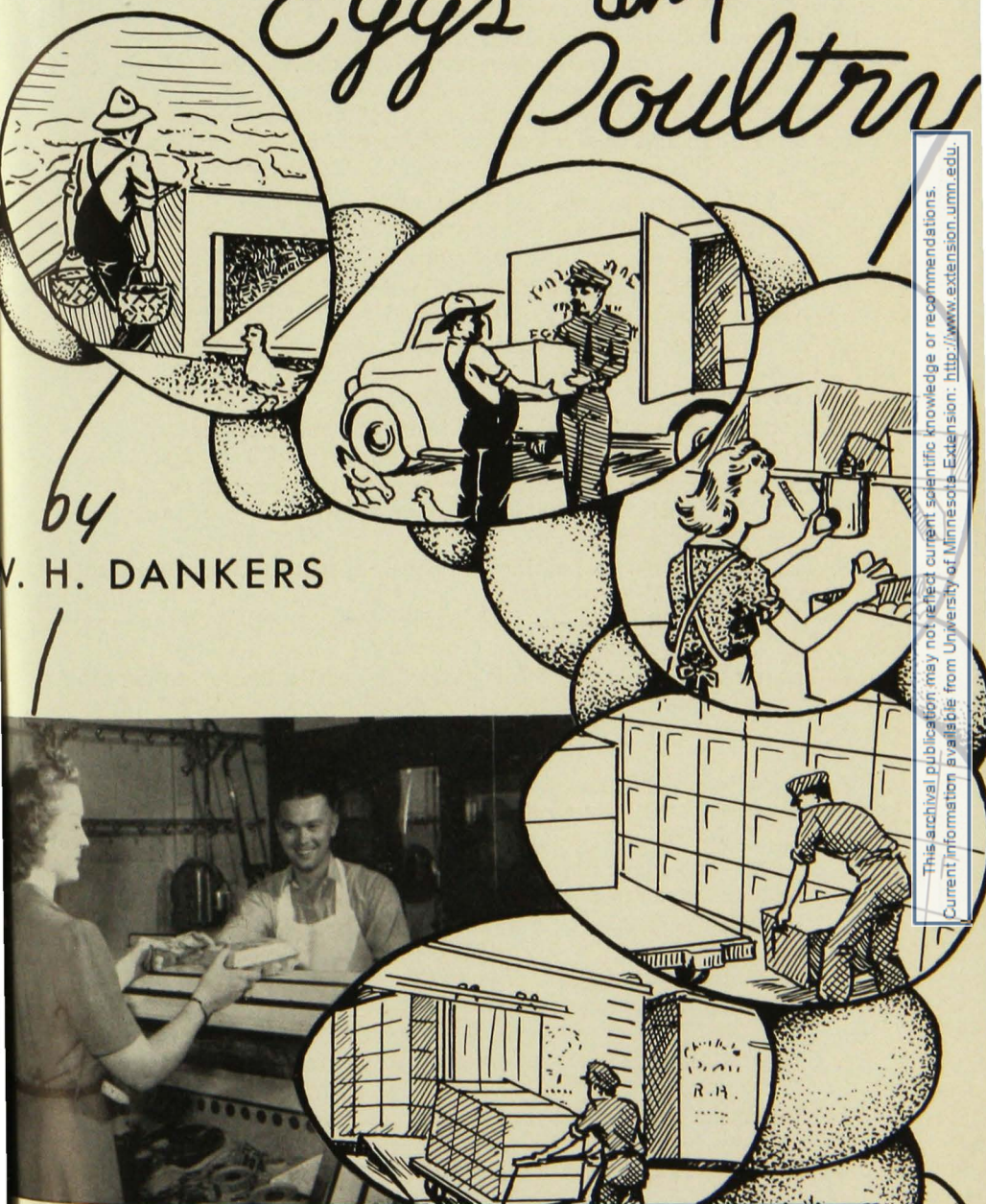
Marketing MINNESOTA Eggs and Poultry



by

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Egg and Poultry Marketing Quiz

THIS TEST is prepared to enable Minnesota Agricultural Extension bulletin readers to check their knowledge of egg and poultry marketing. All questions are based on information given in this bulletin. In taking the test, place the number of the correct answer in the space provided after each question.

The answers are given on page 24. An average score for anyone who has read the bulletin is 9 correct, an excellent score 11 correct.

1. In 1938 receipts from chickens and eggs were the following percentage of the total Minnesota cash farm income: (.....)
   (1) One (2) Seven (3) Fifteen
2. Between 1900 and 1925, egg production in Minnesota: (.....)
   (1) Decreased slightly (2) Doubled (3) Tripled
3. The number of egg and poultry dealers in Minnesota is about: (.....)
   (1) 500 (2) 1,000 (3) 5,000
4. If eggs must be washed on the farm, the best cleaner is: (.....)
   (1) Weak lye solution (2) Soapy water (3) Vinegar
5. The most satisfactory container for gathering eggs is a: (.....)
   (1) Milk pail (2) Wire or reed basket (3) Apron or hat
6. The type of dealer holding the most egg licenses in Minnesota is the: (.....)
   (1) Merchant (2) Cooperative creamery (3) Produce dealer
7. The type of dealer who has paid the most attention to grading and refrigeration is the: (.....)
   (1) Merchant (2) Cooperative creamery (3) Produce dealer
8. Marketing of Minnesota eggs can be greatly improved by the adoption of the best methods now being used in: (.....)
   (1) The East (2) The West (3) Minnesota
9. In 1941 the most important advancement made in Minnesota egg laws was the adoption of: (.....)
   (1) Federal grades (2) A no grade system (3) Compulsory grading
10. The Minnesota egg law requires that dealers selling ungraded eggs must designate them as: (.....)
    (1) Fresh (2) Inferior (3) Unclassified
11. Under Minnesota grades best eggs are classified as: (.....)
    (1) Special (2) Extra (3) Standard
12. The major reason for the failure of poultry dressing plants is: (.....)
    (1) Too large volume (2) Inadequate grading (3) Too small volume

Marketing Minnesota Eggs and Poultry

W. H. Dankers[1]

CHICKEN raising and egg production play an important part in Minnesota agriculture. From 1900 to 1925 the number of chickens and the production of eggs on Minnesota farms increased steadily and more than doubled. Since 1925, the increase in numbers of chickens has been slight. As a result of better management and improved practices, the number of eggs per layer and the total production of eggs have increased. The cost of producing a dozen eggs has gone down.

Production of eggs varies greatly between counties in the state. The number of dozens of eggs produced per farm acre is shown by counties on page 4. In 1938 the value of chickens and eggs produced in Minnesota was $39,100,000, and the value of the portion sold was $29,400,000. The receipts from chickens and eggs constituted approximately 7 per cent of the total cash farm income for that year.

Naturally many marketing problems have arisen with the development of the industry. Some of the more significant questions regarding egg marketing are:

1. How satisfactory are production and methods of handling eggs on the farm?

2. How satisfactorily are eggs handled from the time they are purchased by a local agency until they arrive in consuming centers?

Are they held at favorable temperatures and favorable conditions generally to maintain quality?

Is there unnecessary delay in getting them to the consumer?

To what extent is there a duplication of marketing facilities and services?

3. Is there a possibility of reducing the margin between the producer's and the consumer's price of eggs?

[1] William A. Newman, former graduate assistant in the Division of Agricultural Economics, aided in obtaining and compiling survey material.

Who Handles Minnesota Eggs and Poultry?

Minnesota has over 5,000 egg and poultry dealers. These dealers are classified in table 1.

The merchant still provides the chief market outlet for the farmer's eggs. Of the 5,243 dealers for whom licenses were recorded in the State Department of Agriculture, Poultry and Egg Division, in 1938, 4,117 or 78.5 per cent were merchants. Just what per cent of the eggs go through the merchant's hands is not known since total volume records for various types of buyers could not be secured.

Produce dealers held 6.7 per cent of all egg licenses. The proportion of the total volume of eggs handled is considerably higher because the average volume per dealer is larger than the volume per merchant dealer.

Chain stores held 5.5 per cent of all licenses issued. Cooperative organiza-

Table 1. Minnesota Poultry and Egg License Holders, 1938

Types of dealers	Number of dealers	Per cent of dealers
All dealers	5,243	100.0
Merchants	4,117	78.5
Chain stores	287*	5.5
Produce dealers	354*	6.7
Packers	118*	2.2
Centralizers and private creameries	113*	2.2
Cooperative creameries and other cooperatives	164	3.2
Others	90	1.7

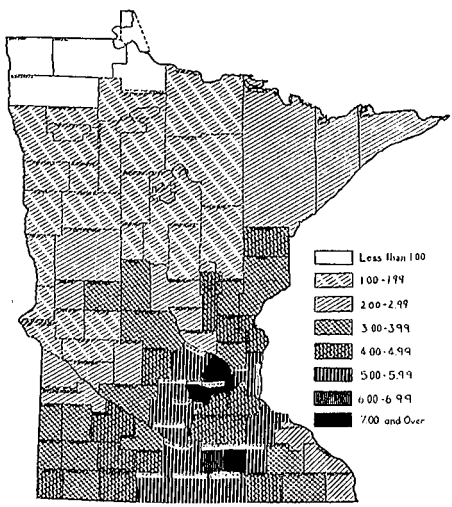
* One large dealer may be represented a number of times in the licenses reported. A licens is required by each local dealer even though the ownership may be the same for a number of units

tions (creameries and other cooperatives) held 3.2 per cent, packers 2.2 per cent, centralizers and private creameries 2.2 per cent, and hatcheries, meat markets, and others 1.7 per cent.

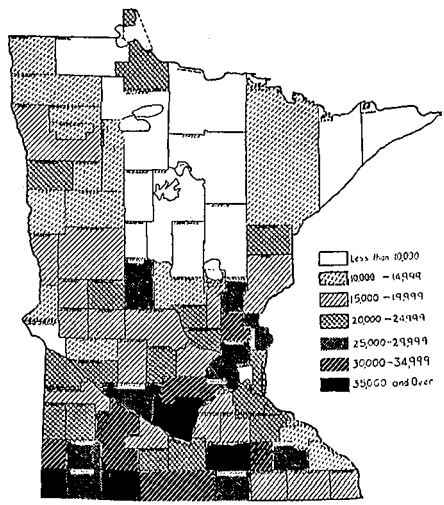
Of the 164 dealers classified as cooperative creameries and "other cooperatives," 80 were creameries. This is a small percentage of the total of over 600 cooperative creameries in Minnesota. The 84 "other cooperatives" were principally cooperative retail stores. Of the "centralizers and private creameries," 71 were owned by centralizers and 42 were private creameries.

Time in Business

Over one half of all the dealers had held licenses continuously for six or more years (table 2). By types, this was the case for merchants, chain stores, produce dealers, and centralizers Less than half of the packers and



Central and southern Minnesota are the state's heaviest egg-producing areas. The above map shows the dozens of eggs produced per farm acre, by counties, 1935.



Low volume results in high unit handling costs and inefficient marketing. The above map shows the dozens of eggs produced per dealer, by counties, 1938.

Table 2. Continuous Period of Years in Business, 1938*

Types of dealers	Number of years in business				
	1	2	3-5	6-10	Over 10
	Per cent				
All dealers	14.6	10.0	21.9	31.1	22.4
Merchants	15.4	10.5	21.0	30.9	22.2
Chain stores	13.2	9.1	20.6	26.8	30.3
Produce dealers	13.0	7.9	28.0	34.7	16.4
Packers	16.1	8.5	33.9	30.5	11.0
Centralizers and private creameries	9.8	8.0	30.4	24.1	27.7
Hatcheries	23.6	15.8	26.3	31.6	2.7
Meat markets	17.4	8.7	30.4	34.8	8.7
Cooperative creameries and other cooperatives	4.2	4.7	18.5	36.9	35.7
Others	10.3	10.3	24.1	34.5	20.8

* Egg and poultry licenses are issued for one year. This table shows the number of continuous years licenses were held.

hatcheries had held licenses for that length of time. Three fourths of the cooperatives, both creameries and others, had held licenses continuously for over six years. Most cooperatives who have started the poultry and egg sideline seem to continue it. Only a small percentage of those now operating had held licenses for only one or two years.

Production Per Dealer

The number of dozens of eggs produced per dealer is shown by counties on page 4. In the northern part of the state and especially in northeastern Minnesota the poultry population is sparse. In many counties of this area the annual production per dealer is below 10,000 dozens of eggs (333 cases). This compares with an average annual production per dealer of over 35,000 dozens (1,167 cases) in some southern counties. Even this larger amount averages only about 96 dozens (3.2 cases) per day. **Low volume results in high per unit handling costs and undesirable handling methods.**

Quality Maintenance Begins on the Farm

The efforts of merchants and dealers to maintain egg quality are in vain if the farmer fails to take proper care of eggs while they are still on the farm. Some practices every producer should follow are:

1. Gather eggs three times a day.
2. Cool eggs quickly. A wire or reed basket is desirable for both gathering and cooling.
3. Keep eggs clean. If eggs become slightly dirty, clean them with steel wool or sandpaper. If they need to be washed, use a weak lye solution and not water or soapy water.
4. Store eggs in a cool, humid place.
5. Sort out dirty, cracked, or odd-size eggs and use at home.
6. Deliver eggs at least three times a week during hot summer weather and cover while en route.

A SURVEY of egg and poultry marketing problems was made in Minnesota in 1938. Questionnaires were mailed to a representative number of producers, merchants, cooperative creameries, "other cooperatives" (largely retail stores), and produce companies to determine methods of handling eggs on the farm and methods of handling eggs and poultry while en route from the local dealer to consuming centers.

Special efforts toward quality maintenance while eggs are en route to the consumer are in vain if the eggs are of low quality when they enter market channels. Satisfactory practices must be followed on the farm.

Gather Eggs Frequently

A report from 192 egg producers revealed that 46 (24 per cent) were gathering eggs only once a day. In the summer these eggs are subjected to hot weather temperatures for 10 to 12 hours before gathering. Furthermore, such eggs are exposed to constant high body temperatures of hens on the nest. High temperature is the largest single item in reducing interior quality and in lowering the grade of the egg when sold. Out of the 192 reporting, 98 (51 per cent) were gathering twice a day. All together 75 per cent were gathering eggs either once or twice a day which is not often enough to maintain high quality. **Gather eggs three times a day.**

Use Wire or Reed Baskets

Most producers gather eggs in a can or pail (table 3). Such a practice is unsatisfactory if eggs are allowed to cool in these same containers. E. M. Funk at the Missouri Agricultural Experiment Station found that with room temperatures at 50° F. an egg in the center of a galvanized pail containing

Table 3. Containers Used by Producers for Gathering and Cooling Eggs, 1938

Practice	Number of farmers reporting	Per cent of farmers reporting
Containers in which eggs were gathered		
Total number reporting	191	100.0
Can or pail	138	72.2
Wire basket	41	21.5
Wood or reed basket	12	6.3
Containers in which eggs were cooled		
Total number reporting	175	100.0
Can or pail	86	49.1
Wire basket	32	18.3
Wood or reed basket	6	3.4
Cases in which eggs were marketed	51	29.2

156 eggs required 10 to 12 hours for cooling to 68° F. or below, and an egg in the center of a wire basket containing the same number of eggs required only five or six hours. Packing eggs in cases immediately after gathering should be discouraged because it results in very slow cooling. **The use of reed or wire baskets will allow air circulation around the eggs and more rapid cooling.**

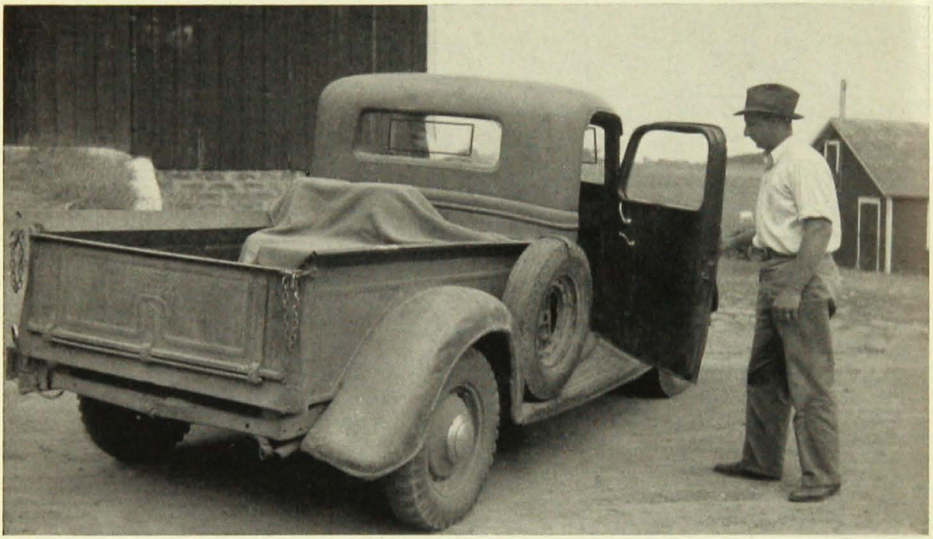
Keep Eggs Clean

Greater care should be given to keeping eggs clean. Improvement can be made here in the way of confining flocks, gathering eggs more often, and keeping nests cleaner. In 22 (12 per cent) of 179 cases studied, more than 15 per cent of the eggs gathered were dirty. In 12 (7 per cent) more cases, from 11 to 15 per cent of the eggs were dirty.

Various methods are used for washing and cleaning dirty eggs. Out of 160 producers, 95 (59 per cent) were using ordinary water. This is unsatisfactory because it removes the outside covering known as the "cuticle" and gives the shell a glossy finish. Eggs washed in this manner spoil much more rapidly when placed in storage (the outlet for a considerable portion of surplus Midwestern eggs).

Another 31 (33 per cent) producers used either vinegar or soapy water, both unsatisfactory methods. A small number of producers reported using

Eggs should be gathered three times a day in wire or reed baskets and then stored in a cool, humid place such as the above insulated well house, or in the cellar.



Eggs should be delivered to market at least three times a week during the hot summer months. Often they can be hauled with the milk or cream. Eggs should be covered with canvas or other suitable material while en route to market.

steel wool and sandpaper; these are satisfactory for cleaning eggs that are only slightly soiled.

The best way to clean dirty eggs is with a **weak lye solution** (one per cent). In Missouri experiments it was found that eggs washed in a weak lye solution would come out of storage in much better condition than those washed in other solutions. This method was used by only four producers out of the 160 reporting. **Keep the number of dirty eggs at a minimum so that washing is unnecessary.**

Store in Cool, Humid Place

On many farms the cellar is the most suitable place for holding eggs if no musty odors are present. Of 188 producers in the study, 104 (55 per cent) stored eggs in the cellar. Another 16 (8½ per cent) kept the eggs in the cellar during the summer months. Two producers had an ice house for egg storage.

The other 66 (35 per cent) farmers were using storage facilities unsuited to maintaining egg quality. Facilities such as the house proper, summer kitchen, pantry, porch, or shed are, in most cases, unsatisfactory because the air is too dry and the temperatures are too high during the hot weather season.

If possible keep eggs between 40° and 55° F. Many producers kept eggs too close to a kitchen range or some other stove or register. Of the 69 producers keeping eggs in the house, 52 (75 per cent) kept the eggs within 15 feet of a heating unit. This results in

rapid deterioration of quality. **Whatever the facilities, all producers should keep the eggs in a cool and humid place.**

Sort Eggs Carefully

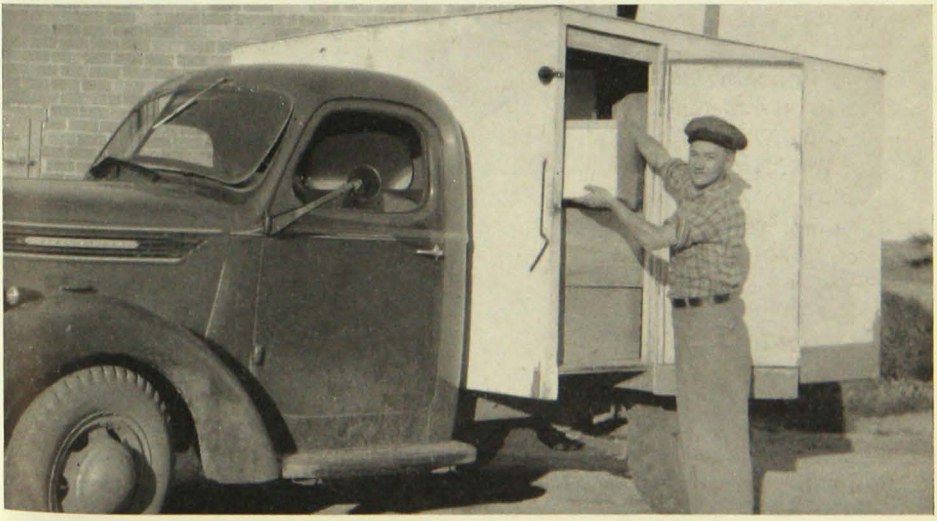
When eggs are marketed "on grade," "cracks" and "dirties" must be sold at a lower price. When cracks and oversized eggs are packed along with the rest, there is danger that they will break in transit, and the contents soil other eggs that will consequently be sold on a lower grade. Producers should sort out the irregular eggs and the cracks and dirties so as to obtain uniform size in the eggs marketed. The irregular eggs and the cracks and dirties can be used for home purposes to good advantage. It was found that 113 (61 per cent) out of 188 producers sorted the eggs before marketing.

Deliver Eggs Frequently

Out of 165 producers reporting, 59 delivered eggs to market only once a week. Another 78 made deliveries twice a week so that altogether 137 (83 per cent) delivered either once or twice a week. This is not often enough unless storage conditions on the farm are particularly good.

How often eggs need to be delivered to market will vary considerably with weather conditions. Producers should be encouraged to deliver eggs to market at least three times a week during the summer even though smaller producers may have to deliver half case or smaller lots.

For specific suggestions on better methods of handling eggs on the farm, see University of Minnesota Agricultural Extension Folder 80, "More Money for Eggs."



Many progressive dealers with sufficient volume have established regular routes to gather eggs directly from the producers. The insulated truck shown above helps maintain egg quality between producer and the shipping point.

Marketing Methods Must Fit Regional Situation

Marketing methods should be adopted to fit the area in question. No one marketing method will fit all sections of the United States or even all parts of Minnesota. Broadly speaking, Minnesota can be divided into four areas each of which has its own egg marketing problems. These are:

1. The low-producing, deficient (consumption exceeds production) area of northeastern and north central Minnesota.
2. The high-producing Twin City area surrounding the deficient counties, Hennepin and Ramsey.
3. The surplus area of northwestern and west central Minnesota.
4. The surplus area of southern Minnesota.

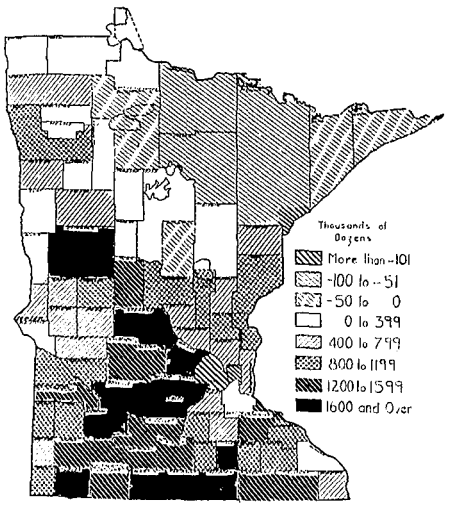
UNIFORM marketing methods cannot be adopted. The local situation must be studied carefully to determine the most suitable marketing method.

Marketing methods that proved successful in commercial egg-producing areas of the West have been assumed to fit in the Middlewest where the egg and poultry enterprise is largely a sideline to other farm enterprises. Early cooperative efforts resulted in a comprehensive organization that gathered small lots of eggs from a large area. Procurement costs were high, and when the eggs were finally ready for shipment to consuming centers, quality had deteriorated. The returns to the producer were not sufficiently high to encourage his continued patronage, and the organizations failed.

Some enthusiasm still prevails in both cooperative and private enterprise for advancing such a system. In a haphazard way such a system is now in effect, and eggs are gathered in small lots and in time are brought together for shipment in larger lots to consuming centers. This delays getting eggs to market which results in low quality and in costly duplication of procurement and other marketing facilities. Such a system will make it impossible for the Middlewest to compete on a quality basis with the commercial egg-production areas of the Pacific Coast and the North Atlantic region. **The problem can be solved by adopting marketing methods to fit the area in question.**

Problem Varies in State

No one method can be applied to an area even as small as one state. There are a number of egg marketing areas in Minnesota with different problems requiring different solutions. These areas are determined by the relationship of production and consumption.



Excess production of eggs over consumption. In northeastern Minnesota and in Hennepin and Ramsey counties more eggs are consumed than produced. In the rest of the state production exceeds consumption.

(See figure above.) The boundary lines of these areas will vary with changes in poultry population, seasonality in production, feed conditions, and the demand for eggs. Roughly the state can be divided into four areas:[2]

1. The deficient area (consumption exceeding production) in the northeast and north central sections of the state. Such a deficiency prevails within a number of counties because of low production. It is intensified because of the excellent market provided by Duluth. A considerable supply of "outside" eggs logically moves into this area and particularly into the Duluth market.

2. The deficient area of the two high production counties of Ramsey and Hennepin brought about by the major population centers of St. Paul and Minneapolis. This area differs from the northern deficient area in that it is near to abundant and excess production in the counties immediately surrounding Ramsey and Hennepin. Many direct producer-consumer or producer-retailer marketing arrangements are in effect.

3 and 4. The two surplus areas of northwestern and west central Minnesota and the entire southern part of the state. The northwestern and west central area differs from the southern area in that production is not as much in excess of consumption and that marketing methods are at present somewhat different. A large number of the cooperative creameries handling eggs are located in the west central area.

In the southern area, the merchant handler more definitely prevails. The excess production in southeastern Minnesota is not as great as in southwestern Minnesota because of lower total production and good local markets provided by such cities as Rochester and Winona, Minnesota, and LaCrosse, Wisconsin.

Deficient Areas

The problem in the two deficient areas is similar. Little concern need be given to outside markets, but attention must be given to the home market. Competition from **distant** outside sources must first of all be met by high quality production to equal or better that maintained in the outside supply (a problem that faces the northeastern area and that at times has forced producers from that deficient area to find "outside" markets for low quality eggs that netted a low price). Unless additional costs are too high, further effort should be made to supply this home market more continuously throughout

[2] Donald Wyman, "A Study of County Egg Prices Within Minnesota and in Comparison with Large Eastern Markets," Master's Thesis, University of Minnesota, 1940.

the year. The net return to the producer should be higher because of higher prices during the season of a short supply and consequently higher average prices for the year.

Production could be "leveled out" materially through better management with little if any additional cost by obtaining earlier chicks, feeding a balanced ration, maturing pullets more rapidly, housing them earlier in the fall, and confining the laying flock.

Further effort should be made in these areas to bring about more desirable and stable relationships between buyers and sellers rather than the "hit and miss" individual contact system now in effect. This may involve organization of producer groups and requires a comprehensive educational program with producers, handlers, and consumers regarding egg quality, how it can best be maintained, and the need for standardized grading.

Surplus Areas

Aside from the difference in marketing methods, there is much similarity in the problem facing the two surplus areas. Producers and handlers have to look for markets in the East and Chicago and to study these distant market conditions. The delay in marketing and the methods commonly used place Minnesota eggs from the surplus areas at a disadvantage with other sources, particularly during the summer months. This has led to the assumption on the part of buyers that Minnesota and other Midwestern states are not "reliable" sources for "good" eggs.

Improved Methods by Local Handlers Necessary

Besides adopting marketing methods suitable to the area in question, present egg-marketing practices can be improved greatly. Progress has already been made by many local dealers, but the need for improvement is still great, particularly in the surplus areas. If egg marketing is to become more efficient, the following recommendations should be observed.

1. Volume per local dealer should be increased. Efficient marketing cannot be carried on with small volume.
2. Dealers should be equipped with and use refrigeration facilities.
3. A uniform grading system should be adopted. Dealers should purchase eggs on grade.
4. Duplication of marketing facilities and handling should be eliminated.

TO REDUCE the per unit handling and shipping costs in the surplus areas, it is desirable to obtain a large volume of eggs from as small an area as possible. Figures of the average volume handled by each of various types of dealers in Minnesota were secured from a representative sample. The average volume of eggs handled per dealer was found to be extremely low. The 243 merchants reporting handled, on the average, less than two cases per day. Twenty-three "other cooperatives" (mostly retail stores) handled about the same amount. Thirty-one cooperative creameries averaged six cases, and 57 produce companies averaged 23 cases per day.

These figures clearly indicate that one of three situations making for inefficiency must prevail: (1) A lapse of time to acquire sufficient volume for shipment causing deterioration in quality; (2) shipment in small lots (less than carload or large truck lots) and higher transportation rates; or (3) movement from one dealer to another so as to accumulate sufficient volume, resulting in delay and lower quality as well as duplication of facilities and unnecessary handling.

Refrigeration Is Necessary

Eggs must be kept under refrigeration to preserve quality once eggs reach marketing channels. High temperatures rapidly reduce interior egg quality. In Cornell University experiments it was found that eggs will break down as much in three days at 99° F. as they will in 23 days at 61° or in 65 days at 45° F. It was found that germ development in fertile eggs began at 68° F.

Table 4. Egg Storage Facilities Used by Private Merchants Who Did Not Keep the Eggs Under Refrigeration, 1938

	Number of merchants	Per cent of merchants
Number reporting	227	100.0
Place of storage		
Store proper	71	31.0
Special room	67	29.0
Store basement	61	27.0
Adjacent building	10	4.0
Special room or adjacent building	2	1.0
Store proper or adjacent building	4	2.0
Store proper or basement	3	2.0
Special room or basement	7	3.0
Adjacent building or basement	2	1.0

Out of 59 that reported, 43 (73 per cent) of the cooperative creameries refrigerated the eggs while in their possession, a high percentage compared to other types of dealers. The remaining creameries did not refrigerate the eggs even though refrigeration facilities were available for the main enterprise. Most of the creameries not refrigerating held the eggs either in a separate room or in an adjoining shed or building where, during the summer, temperatures are high and the air usually dry, a condition unfavorable for maintaining quality.

Out of 63 produce companies that reported, 23 (37 per cent) used refrigeration, and of 37 "other cooperatives," only 5 (14 per cent).

Of 238 merchants, only 11 (5 per cent) used refrigeration. The remaining 227 merchants kept the eggs in places where they were frequently subjected to heat, dry air, and musty odors. The kind of storage facilities provided by the merchants not refrigerating eggs is indicated in table 4. If no objectionable odors are present, the 61 who are keeping eggs in the basement have relatively favorable conditions to the extent possible without refrigeration.

Eggs held in the store proper, a special room, an adjacent building, and similar places are usually held under unfavorable conditions.

The majority of egg dealers, regardless of type, do not appreciate the perishability of an egg and the need for refrigeration. Most dealers could easily improve their conditions for holding eggs with little expenditure of time or money and net a higher price on eggs for themselves and their patrons. The producer's care in holding eggs at lower temperatures on the farm is in vain if such care is not followed with similar care by the local dealer. **Maximum results can come only through joint action.**

Grading Program Important

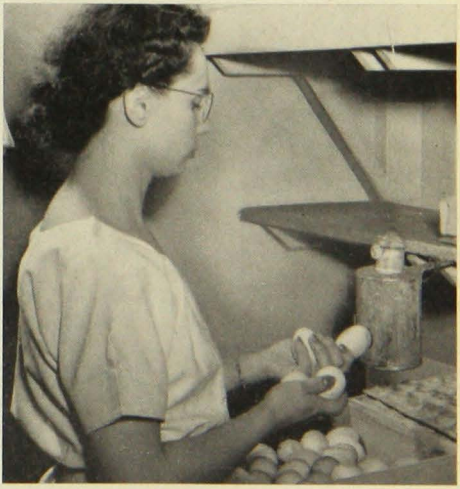
When eggs are not bought on grade, the flock owner who produces clean and uniform eggs from healthy hens and who uses careful methods of storing and packing, is not rewarded for his efforts. The producer marketing poor quality eggs, on the other hand, has a relative advantage. As a result, little emphasis is placed on quality production, and the total net income from the enterprise is lower. With regard to ungraded eggs, the Minnesota rules and regulations under Chapter 471 of the Session Laws of 1937 pro-

vide that "Any person exposing for sale or offering for sale to a consumer, eggs other than of his own production, which are not sold on grade or under a registered brand name, shall label the same 'unclassified.' If ungraded eggs are offered for sale in cartons, bags, or other containers, there shall be plainly and conspicuously marked on each carton, bag or other container, the word 'unclassified.' "

Out of 118 merchants returning questionnaires, 88 (75 per cent) were not purchasing on grade, but were buying "current receipts" or "flock run" and paying only one price. Eight (15 per cent) out of 53 cooperative creameries, 20 (51 per cent) out of 39 "other cooperatives," and 29 (43 per cent) out of 68 produce companies did not buy eggs on grade. Nine produce companies that were not buying on grade were selling on grade. **Where higher quality eggs are available, the additional returns should go to the producer to encourage him to continue producing high quality eggs.**

Among the dealers who bought eggs on grade, little uniformity existed as to the grades used even though the majority of them reported grading No. 1 and No. 2. Some merchants indicated A and B grades (undoubtedly comparable to No. 1 and No. 2) and A-1, A-medium, and pullets with no explanation as to the content of each grade. In some cases no attention was paid to quality, grading being based entirely on weight. In most cases the No. 1 eggs were those over 22 ounces per dozen and "clean and fresh." Compared to U. S. grades of eggs, this requirement is that of a "Standard."[3] (U. S. grades are Special, Extra, Standard, and Trade.) The No. 2 grade included those lighter in weight, cracks, dirties, and unusually large eggs. These are comparable to U. S. Trade. A small number of dealers purchased on three grades, either as Extras, No. 1, and No. 2, or "Henneries," No. 1, and No. 2. Out of 39 produce companies that bought on grade, nine used three grades. This should encourage "quality producers," and over a period of time should increase the total amount of high quality production.

There is great lack of uniformity in the egg and poultry grades established in various states. State grades mean little when the product from surplus regions has to be marketed in distant consuming centers. Federal grades should be improved and used more universally. Herein Minnesota has progressed in that Federal grades were adopted as Minnesota grades in March, 1941.



Proper grading of eggs is extremely important to successful egg marketing. If eggs are not graded, the quality producer is penalized.

[3] A detailed explanation of United States grades is given in "Handbook of Official United States Standards for Individual Eggs," Bureau of Agricultural Economics, United States Department of Agriculture, Washington, D.C.

Concentrating a large volume of eggs for shipment from as small an area as possible cuts down the dealer's handling costs and enables him to pay better prices for eggs. Both railroads and trucks are used for making large volume shipments.

Duplication and Frequent Handling Is Costly

One of the necessary adjustments towards greater efficiency in Minnesota egg marketing is to eliminate the many duplications of the present system. Economy in distribution requires that the produce go through as few hands as possible. The extent to which various market outlets are used by local buyers is indicated in table 5. A large majority of the local buyers were selling eggs to another local buyer, thus duplicating marketing services. Duplication in handling is further indicated, in that a considerable portion of the eggs handled by the 61 local produce companies had previously been purchased from other local agencies. Of the volume of 51 produce companies reporting on this item, 73 per cent had been purchased from farmers, 20 per cent from merchants, 7 per cent from other produce companies, and 1 per cent from creameries. Very few local dealers had eastern outlets even though the eastern markets can be attractive if eggs are of high quality and the volume is sufficient for shipment in carload or large truck lots. Few local buyers shipped direct to Chicago.

Efficiency of Different Types of Dealers

It is obvious that no specific type of marketing agency has contributed much to improvement in egg and poultry marketing practices. What improvement has been made has come through efforts of individual dealers rather than the type of agency they represent.

Progress has been made in that more dealers at the present emphasize careful handling, quality maintenance, and purchase and sale on a grade basis compared to a decade ago. Some differences in types of marketing agencies can be observed.

With low volume per dealer, failure to use refrigeration, very little grading, and sales in large part to local outlets, the merchant dealer in the surplus egg regions is left in an unfavorable position for effective egg marketing. The final result when eggs reach distant consuming centers is lower quality and price.

Although "other cooperatives" (cooperative retail stores largely) practiced refrigeration and grading to a greater extent than private merchant dealers, their efforts are meager, and their position in egg marketing differs little from that of the private merchant. Located largely in a deficiency area, they have a natural advantage because the eggs they purchase should go into local channels. Consequently a sale from one local outlet to another does not represent a duplication of marketing facilities in this area to the extent it does in the surplus areas.

Cooperative creameries handling eggs and poultry have contributed to more effective marketing but they, too, have many adjustments to make. Quality maintenance through refrigeration has been emphasized by cooperative creameries more than by any other type of dealer. In a haphazard manner, grading has been practiced by a large percentage. The volume per dealer is three times that of merchants and "other cooperatives"; however, it is not sufficiently large in most cases to allow economical volume shipments. This has resulted in the common practice of selling to another local buyer, duplication in handling, and lower quality before the product moves to consuming centers.

Local produce companies represent a number of buyers including private produce companies, packers, and centralizers. Probably greater variation exists between individual buyers of this type than any of the other dealers mentioned. The average volume handled per dealer is considerably larger than for other types of dealers. However, a large percentage of the volume handled represents eggs bought from other types of dealers that have been

Table 5. Market Outlets for Minnesota Eggs Used by Various Local Buyers

	Merchants	Produce companies	Cooperative creameries	Other cooperatives
Number reporting	243	61	51	35
Market outlet				
Produce companies	143	30	.....	.....
Packers	19	2	.....	.....
Creameries	8	.....	.....	3
Merchants pools	9	1	.....	1
Minneapolis and St. Paul direct	7	4	.....	.....
Cooperative wholesale	4	5	18	2
Other merchants	5	.....	.....	.....
Local wholesale buyers	.....	.....	15	17
Local retail trade	.....	2	6	10
Truckers	26	1	.....	.....
Miscellaneous	17	.....	.....	.....
Chicago markets	4	5	1	.....
Eastern markets	1	11	11	.....

subjected to unnecessary delay and deterioration in quality. Produce dealers, in general, pay less attention to refrigeration than cooperative creameries and more than private merchants and "other cooperatives." Similarly they pay less attention to grading than cooperative creameries and more than private merchants and "other cooperatives."

PROGRESS HAS BEEN MADE

Steps toward a more satisfactory egg marketing program have been taken by individual organizations representing various types of dealers. The number of such dealers should be increased.

A number of merchants' cooperative egg pools have been organized in southern Minnesota. Some have operated much like a local produce company and have contributed little to effective merchandising. Others have overcome some of the problems.

In one organization eggs are brought together regularly and often, in trucks owned by the merchants' pool, from 25 to 30 merchant members, and are moved to Chicago or Eastern markets by rail. A refrigerator has been constructed along the railroad track at the shipping point to maintain the quality of hold-over eggs. Overhead costs are held at a minimum. Supplementary services are provided, such as purchasing materials and constructing egg cases for members. Joint purchases of groceries are made which are delivered to the merchants on the egg procurement trucks. This makes it possible to reduce the per unit hauling cost. **However, all**

Today eggs are processed in many ways to serve many different buyers. Some modern dealers, operating a large-scale business, break eggs and then freeze them. Some eggs are also put up in powder form.

of the merchants' cooperative egg pools have further work to do in improving egg quality.

With some variations, a similar program has been adopted by a few cooperative creameries. The supply handled is sufficiently large to allow shipment in carload or large truck lots, and largely comes direct from the producers in the area surrounding the creameries. A grading program is in effect. A comprehensive program of education is carried out toward maintenance of egg quality through better methods of handling eggs on the farm. Such an educational program is considered indispensable. Storage facilities include refrigeration and equipment to maintain the proper humidity.

In one organization eggs are brought together from other cooperative creameries. Such member cooperatives are carefully selected on the basis of the quality of eggs they have to offer. A more strict grading program has gone into effect as producers and dealer members have become familiar with quality differences, reflected in financial returns. In the same organization facilities have been provided for dressing chickens and turkeys during certain seasons of the year. The investment is low, considering the available facilities to handle the egg and poultry enterprise in this cooperative creamery. This is significant because it has resulted in lower operating costs (overhead) and has placed this organization in a strong competitive position.

Similarly some large produce companies have launched a program of improved egg marketing practices. Instead of letting the egg supply accumulate from small stations scattered over a wide area, which involves considerable delay in getting large volume shipments and consequent quality deterioration, they have made direct producer contacts for their supply. In some organizations this "direct from producer" supply has been supplemented with a supply from their own outlying stations where the same "direct from producer" method of procurement is followed. These produce companies have placed emphasis on refrigeration, purchase and sale on grade, and rapid movement to market in large lots.

After they are broken, the liquid eggs are run into cans. Then they are frozen and thus preserved for later use.

Price Variations

It is well known that the price of eggs varies greatly from area to area in Minnesota. The reason for this variation is found in the relationship between production and consumption in the area.

1. Prices vary most in areas which shift from an excess production (production exceeds consumption) to an excess consumption basis during the year.
2. There is no one best central market for Minnesota eggs.
3. Location, freight rates, type of product, demand, and season all affect the dealer's choice of the best paying market.

AT ANY given time the price paid to producers for eggs varies from area to area as a result of the excess of production over consumption in some areas compared to excess of consumption over production in others. In a study made of egg prices in Minnesota covering ten years (1929-1938), it was found that prices vary materially more in areas that shift from an excess production to an excess consumption basis during different seasons of the year than in areas that remain on either an excess production or excess consumption basis. As long as the supply of eggs in a locality exceeds the amount demanded for consumption, the producer receives the price in the central market less transportation charges. When eggs produced locally are insufficient for consumption requirements, the producer tends to receive central market price plus transportation costs.

No one central market is the best market for all times nor even for all seasons of the year. Also, what may be the best market for producers and dealers in one area may not be the best market for other producers and dealers because of differences in location and the type of product marketed. Dealers could, in many cases, route eggs more directly and obtain additional returns for themselves and the producers. Variations in freight rates alone for different zones may give a preference to one or another market. Price studies bear out the indication of a large number of dealers that "top" quality can more easily compete on eastern markets and may be the deciding factor in determining whether to ship to the East or elsewhere. In a general way the margin of price in Eastern markets over Chicago and Minneapolis-St. Paul should equal cost of transportation, handling commissions, and other incidentals necessary to get the product on more distant markets.

The seasonality of production near consuming centers, variations between markets in the demand for a certain quality or type of product (white and brown eggs, for example), and other similar items may considerably affect price differences. Although there are advantages in establishing a "reputation" for quality and a dependable supply with one central market buyer, local dealers should be alert to the best markets available from year to year and from season to season.

Marketing Live and Dressed Poultry

The marketing of live and dressed poultry presents a number of problems quite different from those met in handling eggs. Persons planning to start a dressed poultry enterprise should remember that:

1. A large investment in buildings and equipment is necessary. Unless a large volume of poultry is available in the community, unit costs will be too high to justify such expenditures.
2. In many local communities the live poultry purchased should be sold again for concentration in sufficient volume to effect lower dressing costs.
3. Grading should be done on the basis of weight, condition, and quality.
4. Duplication in marketing facilities increases marketing costs and, in the long run, results in lower prices to the producer.

HANDLING of dressed poultry presents a number of problems quite different from those in handling eggs. Whether the dressed poultry enterprise is a sideline or a major enterprise, a considerable expenditure is necessary for buildings and equipment. Such an investment and resulting costs (taxes, interest, depreciation, repairs, etc.) can be justified only when the available volume of poultry is sufficient to keep **per unit costs** low. A dressing plant cannot be justified in each of the many local communities, especially if the poultry production is relatively low. In many sections of the state, too many dressing plants have been established. Such a situation frequently prohibits the installation of more modern equipment, that with sufficient volume would

Table 6. Market Outlets Used for Minnesota Live Poultry by Local Buyers

	Cooperative creameries	Produce companies
Number reporting	40	38
Market outlet		
Cooperative wholesale	15	2
Local wholesale buyers	24	24
Eastern buyers	1*	3*
Chicago buyers	0	2
Local retail trade	0	6†
Minneapolis buyer	0	1

* Dressed at the plant where purchased.
† Marketing both dressed and live poultry.

increase the efficiency and would result in lower per unit costs. The inefficiency of a low volume plant is frequently intensified by inexperienced management.

Concentrate Volume

With the present marketing system, it appears logical that in many local areas the live poultry that is purchased should again be sold as live poultry so as to concentrate a sufficient volume for efficient and low cost dressing. Any group interested in the dressed poultry enterprise should proceed with caution and only after a careful survey has shown that a sufficient volume is available for efficient operation.

Very few merchants and "other cooperatives" reported handling any poultry. Out of 60 reporting, only one cooperative creamery dressed poultry and 47 (78 per cent) handled live poultry (not including turkeys). The average volume of poultry handled in 1937 by 25 cooperative creameries that reported on this item was 43,030 pounds. The average volume of live poultry (not including turkeys) handled by 38 produce companies was 230,386 pounds. Fifteen produce companies that reported volume figures on dressed poul-

Efficient egg and poultry marketing requires large volume to keep unit costs low. Efficient poultry plants use modern mass-production techniques in processing poultry.

TOP—One man kills and bleeds the chickens as they pass him in the dressing line.

CENTER—After being dipped in hot water, the chickens are plucked by hand.

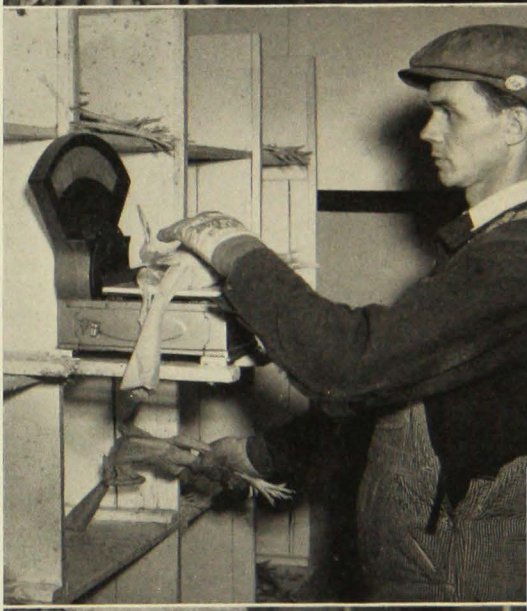
BOTTOM—Later the birds are dipped in hot wax. The wax is taken off the birds to remove the remaining feathers.

try (not including turkeys) had an average volume of 672,201 pounds, practically three times that of the produce companies handling live poultry.

Inadequate grading is one of the big problems in the marketing of poultry meats. Most of the cooperative creameries and produce companies were purchasing live poultry on grade; however, there was a great lack of uniformity in grades used. Most reports indicated grading was done almost entirely on weight, instead of condition and quality.

Duplication Costly

Of 40 cooperative creameries and 38 produce companies that were buying live poultry, a large number were selling it as live poultry to local wholesale buyers as shown in table 6. These local wholesale buyers are mainly produce companies and packer buyers. To the extent that these local dealers are located in the same marketing center, there is a duplication of marketing facilities. Duplication of marketing facilities increases poultry marketing costs and the spread between the producer's and consumer's price. This in the long run is reflected in a lower price to the producer for his poultry products.



In the more efficient plants hundreds of birds are killed, cleaned, and packaged in a few hours. Some of the remaining steps in processing poultry are shown here.

TOP—In less than one hour after they are killed, the birds are hung on a rack and wheeled into a cold storage room.

CENTER—Later the poultry is graded according to weight, condition, and quality.

BOTTOM—The chickens in each grade are then carefully packed and shipped to the retailers ready for the consumer.

General Recommendations

REGARDLESS of type, organizations interested in the egg and poultry marketing sideline should proceed cautiously and only after a careful analysis of prevailing conditions. Contrary to common practice, emphasis should be placed on securing management with technical training and experience.

In communities where eggs have been purchased on a straight price basis as "current receipts" or "flock run," it is doubtful whether an organization can succeed immediately, with a program of stringent grading. It would seem desirable in such communities to begin with a comprehensive educational program regarding quality and to start buying on nearly the same grades as other buyers in the territory. A significant premium for higher quality eggs is essential. With the continuation of an educational program, an organization could in time adopt a more stringent grading program. There might be an advantage in quoting "premiums" for top grade eggs rather than using the top grade price as a base and quoting deductions from that price for the lower grades. What applies to the purchase of eggs on grade, likewise applies to the purchase of poultry.

From surveys made, it is obvious that a large number of dealers have little knowledge of egg and poultry grades, or of grading. It is further apparent that many egg dealers do not realize how rapidly egg quality deteriorates under adverse conditions; nor what can be done to avoid it. With a real interest in the enterprise and the necessary information about it, egg and poultry dealers could do much to avoid quality deterioration while the eggs are in their possession and improve handling methods on the farm through an educational program with producers. Of the dealers reporting in the survey, one half of the cooperative creameries, over one half of the "other cooperatives" and produce companies, and three fourths of the merchants made no effort to educate producers to better handling methods.

ANSWERS TO QUIZ

1. ..... (2)	5. ..... (2)	9. ..... (1)
2. ..... (2)	6. ..... (1)	10. ..... (3)
3. ..... (3)	7. ..... (2)	11. ..... (1)
4. ..... (1)	8. ..... (3)	12. ..... (3)

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